

**REMARKS**

Claims 1, 4-12, and 15-27 remain in the application, with claims 1 and 12 in independent form. Claims 5 and 16 have been presently amended to correct an antecedent basis issue. Claims 36-41 have been cancelled as directed to a non-elected invention that was subjected to a Restriction Requirement.

**Applicants' Interview Summary**

The Applicants appreciate the opportunity that was given to interview the Examiner relative to the rejections over Hahn et al. (U.S.P.N. 5,985,943) in view of Eagleton et al. (British Patent Specification No. 1,012,277). To summarize the interview, the Applicants addressed the Examiner's argument that polyethylene wax is an equivalent to the C<sub>10</sub> to C<sub>30</sub> paraffin wax described in Hahn et al. Specifically, the Examiner has used the disclosure of Eagleton et al., which discloses that polyethylene wax or "paraffin wax" could be used for coating a polystyrene bead to reduce cooling times of the polystyrene bead, to establish the equivalence of polyethylene wax to C<sub>10</sub> to C<sub>30</sub> paraffin wax of Hahn et al. for reducing moisture content of the polystyrene bead. The Applicants noted that "paraffin" is an extremely broad class of chemicals that covers more than just C<sub>10</sub> to C<sub>30</sub> paraffin wax. The Applicants also noted that Hahn et al., in column 1 lines 37-39, pointedly disparages the application of liquid paraffin oils to polystyrene beads, and that this disparagement indicates that not all paraffins are suitable for the purposes of Hahn et al. For this reason, the Applicants argued that the prior art does not establish that polyethylene wax is equivalent to the specific C<sub>10</sub> to C<sub>30</sub> paraffin wax for reducing moisture absorption, as prescribed in Hahn et al.

At the conclusion of the Interview, the Examiner maintained her position with respect to the obviousness to replace the C<sub>10</sub> to C<sub>30</sub> paraffin wax of Hahn et al. with the polyethylene wax of Eagleton et al. and no agreements were reached.

**Response to Final Rejections**

To reiterate the current status of the claims, the Examiner has maintained the rejection of claims 1, 4-12, and 15-27 under 35 U.S.C. 103 over Hahn et al. in view of Eagleton et al.

In maintaining the rejections under 35 U.S.C. 103, the Examiner correctly recognizes that Hahn et al. differs from the claimed invention because Hahn et al. does not disclose applying a polyethylene wax as the polymeric wax. To remedy the deficiencies of Hahn et al., the Examiner has turned to Eagleton et al. and has asserted that Eagleton et al. teaches that polyethylene wax is an equivalent to paraffin wax. In maintaining the rejection, the Examiner noted that “[a]n express suggestion to substitute one equivalent component or process for another is not necessary to render such substitution obvious.” *Citation omitted*. The Examiner has also maintained, in error, that the fact that Eagleton et al. teaches that excellent results have been obtained with polyethylene wax as opposed to other waxes such as paraffin wax provides even more motivation to make the substitution of polyethylene wax for the C<sub>10</sub> to C<sub>30</sub> paraffin wax of Hahn et al.

The Applicants respectfully assert that there is no motivation to make the combination as made by the Examiner, and that polyethylene wax and C<sub>10</sub> to C<sub>30</sub> paraffin wax are not art-recognized equivalents.

As to the motivation to combine Hahn et al. and Eagleton et al., the Examiner is reminded that “[t]he mere fact that the prior art could be so modified would not have made

the modification obvious unless the prior art suggested the desirability of the modification.” *In re Gordon*, 733 F.2d 900, 902 (Fed. Cir. 1984). Further, “the Examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed.” *In re Rouffet*, 149 F.3d 1350 (Fed. Cir. 1998).

In the present case, it is clear that a skilled artisan, faced with the problem of reducing abrasion resistance of expandable polystyrene (EPS), would **not** look to Eagleton et al. to remedy the deficiencies of Hahn et al., particularly because neither Hahn et al. nor Eagleton et al. address the problem of reducing abrasion of the expandable polystyrene. While the Applicants recognize that the same motivation that resulted in the present invention is not required to make the asserted combination, one of skill in the art faced with the problems addressed by Hahn et al. would also **not** look to Eagleton et al. to remedy any deficiencies therein. Specifically, although Eagleton et al. discloses that a further advantage of their invention is that “the moisture content of the [EPS] block is lowered,” this advantage is merely ancillary to the primary goal of Eagleton et al. of shortening the time for which the EPS block needs to be allowed to cool before it can be removed from a mold. As such, the specific waxes disclosed in Eagleton et al. are chosen primarily for shortening cooling time of the EPS block. Conversely, Hahn et al. is focused on reducing moisture absorption capacity of EPS beads. Further, Hahn et al. has pointedly disparaged the use of liquid paraffin oils, which Hahn et al. admits have been used to reduce cooling times of EPS beads.

The disparagement of liquid paraffin oils illustrates that Hahn et al. recognizes that not all

such compositions used for reducing cooling times of EPS beads are suitable for purposes of that invention. As such, a skilled artisan looking to Hahn et al, which deals primarily with reducing moisture absorption capacity of EPS beads, would not look to Eagleton et al., which deals primarily with shortening cooling time of an EPS block made with the EPS beads, to fill the deficiencies of Hahn et al. As such, there is no motivation to combine Hahn et al. and Eagleton et al. as the Examiner has done.

As to the art-recognized equivalency of polyethylene wax and C<sub>10</sub> to C<sub>30</sub> paraffin wax, the Examiner is reminded that, even if one were to ignore the fact that there is no connection whatsoever in Eagleton et al. between polyethylene wax and the specific group of C<sub>10</sub> to C<sub>30</sub> paraffin waxes, "listing several compounds as interchangeable for one purpose will not establish their equivalency for all purposes." See *In re Jezi*, 396 F.2d 1009, 1012 (C.C.P.A. 1968). The Applicants respectfully assert that, even though Eagleton et al. has listed both paraffin wax and polyethylene wax as suitable primarily **for the purpose of shortening cooling time of an EPS block**, this fact does not establish that paraffin wax and polyethylene wax are equivalents for all purposes, and surely does not establish their equivalence for purposes of reducing water capacity of EPS beads. Further, as previously noted, Eagleton et al. has even highlighted polyethylene wax as providing excellent results **for the purpose of shortening cooling time of an EPS block**, to the exclusion of paraffin wax, which indicates that polyethylene wax is not even an equivalent to paraffin wax but is superior in some circumstances. Contrary to the Examiner's assertions, this fact does not provide more motivation to substitute paraffin wax with polyethylene wax **in the context of Hahn et al.**, which has a different focus from Eagleton et al. For these reasons, the Applicants respectfully

maintain that polyethylene wax is not an art-recognized equivalent of C<sub>10</sub> to C<sub>30</sub> paraffin wax.

In view of the remarks set forth above, it is respectfully submitted that the rejections under 35 U.S.C. 103 of claims 1 and 12 are improper and must be withdrawn. Thus, claims 1 and 12 are in condition for allowance. Furthermore, the remaining claims depend either directly or indirectly from the novel and non-obvious features of these independent claims such that these claims are also allowable.

The Commissioner is authorized to charge the Deposit Account No. 08-2789, in the name of Howard & Howard Attorneys, P.C., for any fees or credit the account for any overpayment.

**Respectfully submitted,**

**HOWARD & HOWARD ATTORNEYS**

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Date

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